ProVisual, INC.
www.provisualusa.com
3399 NW 72nd Ave. Suite 123
Miami, Florida 33122. United states
Phone:(001) 305-594-4151

Ultra Wide Dynamic
IR Waterproof Bullet Camera

User's Manual

PROVISUAL®

DIGITAL PIXEL® SYSTEM
FROM PIXIM

1. Overview

SW series Ultra WDR cameras are new, CCTV cameras which adopt Pixim's innovative “SEAWOLF” image sensor chip based on Digital Pixel System ® technology. The resolution is up to 690TVL-E and the industry-leading wide dynamic range is up to 120dB. This WDR ensures brilliant image quality under any lighting environment. The image and color quality is also excellent in low illumination environments. This camera series is a ultra wide dynamic range camera in the real sense using digital sampling which can't be paralleled by average wide dynamic range cameras using older generation CCD images. The application of 3D digital noise reduction technology ensures higher S/N, which efficiently reduces the digital storage and transmission data saving system cost. Fashionable and professional exterior design and special all-in-one all directional bracket, makes round-the-clock surveillance easy and convenient.

CB-2085IR-WDR

2.Notes

1. Use the appropriate power supply
The input power will be AC24V or DC12V/AC24V dual-power. Be sure to connect it to the appropriate power. Wrong connection may cause malfunction and/or damage to the camera.

2. Do not attempt to disassemble the camera.
To avoid electric shock, do not remove screws or camera housing. There are no user serviceable parts inside. Ask a qualified service person for servicing.

3. Handle the camera with care.
Do not abuse the camera. Avoid striking, shaking, etc. The camera could be damaged by improper handling or storage.

4. Do note use strong or abrasive detergents when cleaning the camera body.
Use a dry cloth to clean the camera when it is dirty. In case the dirt is hard to remove, use a mild detergent and wipe gently.

5. Do not attempt to aim the camera at the sun.
Do not attempt to aim the camera at the sun or other extremely bright objects that cause smear to appear irrespective of whether the camera is operating or not. This could damage the DPS Sensor.

3.Features

"SEAWOLF" Image Sensor

This camera adopts innovative DPS (Digital Pixel System) image sensor and image processing technology. The sensor picks up details from each pixel based on hundreds of samples per video frame. vs CCD's limited exposures, to ensure wider dynamic range than is possible with analog CCD. The image quality is even brilliant under extreme lighting conditions.

Ultra Wide Dynamic Range

The captured wide dynamic range is 102dB typical and can reach 120dB maximum.

High Effective Resolution

Image resolution as high as 690TVL-E, offering enhanced horizontal and vertical resolution useable in existing as well as new CCTV systems.

3D Noise Eliminating Technology

Adopts Pixim fully digitalized 3D noise reduction technology to minimize noise, extending DVR storage by 30%+.

Lower Illumination

0.1Lux low illumination (IR OFF)

OSD Menu

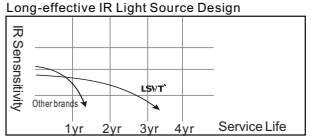
Powerful OSD menu operation function, allows for setting of various parameters and pre-sets.

IR CUT

Built-in filter switch-over device, ensures the cameras work properly both in day and night.

Long-effective IR Light Source Design

Adopts high performance IR LED and heat balance design, effectively extends the service life of LED.



Bracket

Elegant and solid combined type bracket, with video and power cable built-in. makes installation convenient and reliable.

Motion Detection

Motion detection function, blue highlight LED flickers automatically, very good warning function.

Comparison of Wide Dynamic Range camera and average camera

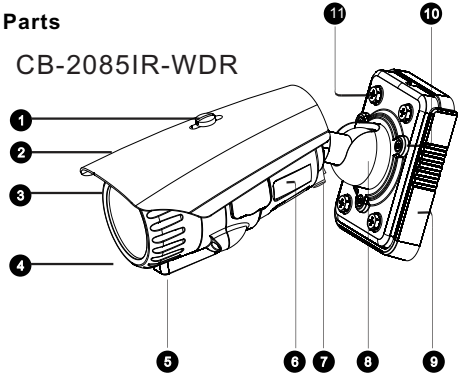
Average camera with BLC OFF

Average camera with BLC ON

Ultra Wide Dynamic Range camera

Parts

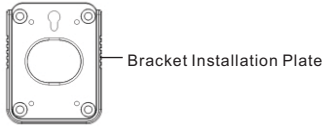
CB-2085IR-WDR



1. Sunshade Screw
2. Sunshade Cover
3. Lens
4. IR LED
5. Lens Adjustment Button
6. Menu Button
7. Cooling Fan
8. Cardan Shaft
9. Bracket Installation Plate
10. Cardan Shaft Fixing Screw
11. Camera Fixing Screw

Camera Installation and Adjustment

1



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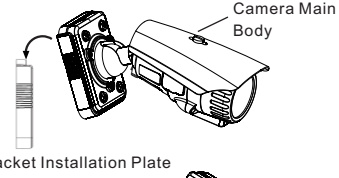

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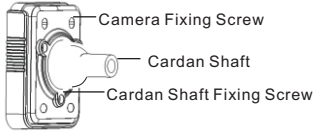

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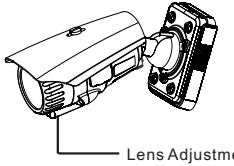
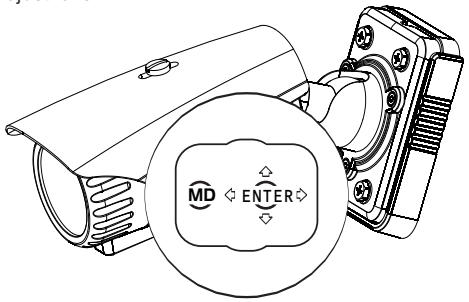
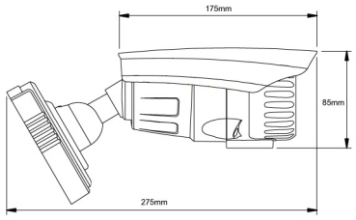
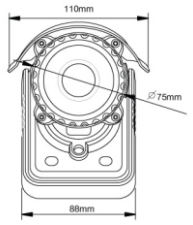


1. Set the camera installation location and fix the bracket installation plate with expansion bolt.
2. Fix the camera main frame to bracket installation plate with screws.
3. Turn the cardan shaft and settle the camera at the required angle and then fix the cardan shaft tightly.
4. Set OSD menu and adjust lens.



Dimension(Unit: mm)





OSD Menu Setup

ENTER: Enter or exit menu

⇧ ⇩ Move up and down by Up and Down button

⇦ ⇨ Move horizontally or modify parameter by Left and Right button

6. Menu Operation

CAMERA SETUP

WDR CONTROL	MEDIUM	(LOW/NORMAL/MEDIUM/HIGH)
BLC	OFF	(OFF/ON)
WHITE BALANCE	ATW	(ATW/AWB)
AGC	NORMAL	(LOW/NORMAL/HIGH)
LENS SELECT	DC	(MANUAL/DC)
FLUORESCENT	OFF	(OFF/CRR/CRR2)
D/N CONTROL	AUTO	(OFF/AUTO/GPIO)
LANGAGE SELECT	ENGLISH	(ENGLISH/CHINESE)
SAVE	DEFAULT	(CANCEL)

WDR ZONE SELECT:

NORMAL METER PRESETS

PRESETS	WD NORMAL	WD NORMAL/SAFE AREA/ATM/LOW 1/3
PRE	SAVE	CANCEL

*Specialists press "Left, Right, Left, Right, Down" button enter superior menu.

WDR Control:

Press Enter to show the menu, move the cursor to WDR Control, set MEDIUM, NORMAL, LOW, HIGH by left and right button, choose the setting for WDR in accordance with the lighting condition, set High in strong lighting contrast to realize higher quality image.

WDR ZONE SELECT: WD NORMAL AREA/ATM/LOW 1/3.

BLC: Move to BLC by Up and Down button, set BLC by Left and Right button: On and Off.

WHITE BALANCE:

Move to White Balance by Up and Down button, set White balance by Left and Right button: AWB: Auto White Balance, ATW: Auto Tracking White Balance. The color's temperature are different in different lighting condition, The color's temperature changes in different lighting condition, so the white color in video image changes if the lighting condition changes. AWB means cameras can compensate color temperature automatically. In some special environment, in order to keep the same color temperature , ATW setting can keep a fixed color temperature

AGC:

Move cursor to AGC by Up and Down button, set AGC by Left and Right Button as : NORMAL, LOW and HIGH. Setting AGC is better for cameras to work in wider lighting range, if the illumination is low, can set AGC high to rise the sensitivity of cameras.

LENS SELECT:

Move cursor to LENS SELECT, set LENS SELECT by Right and Left button as : MANUAL, DC:DC Automatically. MANUAL FOR MANUAL IRIS LENS, DC for AUTO IRIS LENS.

FLUORESCENT:

Move cursor to FLUORESCENT by Up and Down button, set by Left and Right button as: OFF, CRR2: Color Rolling Restrain. Cameras output color rolling image under fluorescent lamp, CRR can restrain color rolling, keep the image stable.

LANGUAGE SELECT:

Move cursor to LANGUAGE SELECT by Up and Down button, set by Left and Right button as : ENGLISH, CHINESE.

D/N CONTROL:

Move cursor to D/N Control by Up and Down button, set D/N by Left and Right button as: OFF, Auto, GPIO: External Control; On. The illumination is very low at night, so we need to rise the sensitivity and improve imaging quality, then we can get better image quality. Set D/N in accordance with different actual need.

SAVE&EXIT:

Move cursor to SAVE&EXIT by Up and Down button, set by Left and Right button as : SAVE&EXIT;DEFAULT,CANCEL.

Technical parameter:

Model			CB-2085IR-WDR
Sensor	**Sensor**		1/3" DPS Sensor (SEAWOLF)
	Video Format		NTSC
	Resolution		690HTVL-E
	Mini illumination		0Lux,(IR-ON)
	Image technology		PIXIM 3D Noise Reduction
	S/N Ratio		≥50dB AGC OFF
Menu Control	**WDR control**		Ultra Wide Dynamic Range: Medium / Normal / Low / High
	BLC		ON, OFF
	AGC		Normal / Low / High
	White Balance	**Mode**	Tracking White Balance, Auto White Balance(ATW)
		Automatic	Auto White Balance 2200K~10000 K
	D/N		OFF, External Control, Auto, ON
	SYNC Mode		INTERNAL
Power	**Voltage**		DC12V/AC24V
	Current		<600mA
Lens			2.8-12mm Auto iris
IR Range			50 M
IR CUT			Auto Switch Over
Working Temperature			-10 C^{o}~50 C^{o}
Size			285 * 96* 125
Weight			1100g

*Specification is subject to change without prior notice